

**IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A gypsum board, comprising:
  - a. a gypsum layer having a first face and a second face and comprising set gypsum; and
  - b. first and second facers affixed to said first and second faces, said first facer being a fibrous mat comprising a non-woven web bonded together with a resinous binder, and said web being composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ .
2. (currently amended) A gypsum board as recited by claim 1, wherein said chopped glass fibers are composed of at least one member selected from the group consisting of E glass, C glass, T glass, sodium borosilicate glass, and mixtures thereof.
3. (currently amended) A gypsum board as recited by claim 1, wherein said chopped glass fibers are composed of E glass.
4. (currently amended) A gypsum board as recited by claim 1, wherein at least about 90% by weight of said chopped glass fibers have a diameter ranging between about 9.5 and 12.5  $\mu\text{m}$ .

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5. (currently amended) A gypsum board as recited by claim 1, wherein at least about 95% by weight of said chopped glass fibers have a diameter ranging between about 9.5 and 12.5  $\mu\text{m}$ .
6. (currently amended) A gypsum board as recited by claim 1, wherein at least about 97% by weight of said chopped glass fibers have a diameter ranging between about 9.5 and 12.5  $\mu\text{m}$ .
7. (currently amended) A gypsum board as recited by claim 1, wherein said chopped glass fibers have an average fiber length ranging from about 6 to 12 mm.
8. (currently amended) A gypsum board as recited by claim 1, wherein at least a majority of said chopped glass fibers have a fiber length ranging from about 6 to 18 mm.
9. (original) A gypsum board as recited by claim 1, wherein said resinous binder is composed of at least one member selected from the group consisting of urea formaldehyde; conventional modified urea formaldehyde; acrylic resin; melamine resin; high nitrogen melamine resin; homopolymer and copolymer of polyacrylic acid having a molecular weight of less than 10,000; crosslinking acrylic copolymer; crosslinked vinyl chloride acrylate copolymer; and modified acrylic latex binder.
10. (original) A gypsum board as recited by claim 1, wherein said resinous binder is composed of a modified acrylic latex binder.

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11. (original) A gypsum board as recited by claim 9, wherein said resinous binder further comprises a cross-linker in an amount ranging up to about 10 weight percent.
12. (original) A gypsum board as recited by claim 11, wherein said cross linker is present in an amount ranging from about 2 to 5 weight percent.
13. (original) A gypsum board as recited by claim 11, wherein said resinous binder comprises melamine formaldehyde.
14. (original) A gypsum board as recited by claim 1, wherein said resinous binder has a glass transition temperature ranging from about 15 to 45°C.
15. (original) A gypsum board as recited by claim 1, wherein said resinous binder further comprises at least one water repellant agent.
16. (currently amended) A gypsum board as recited by claim 1, wherein said fibrous mat further comprises an effective amount of at least one of a flame retardant, a biocide, a fungicide, and mixtures thereof.
17. (original) A gypsum board as recited by claim 1, wherein said fibrous mat has a basis weight ranging from about 0.6 to 2.2 pounds per 100 square feet.
18. (original) A gypsum board as recited by claim 17, wherein said fibrous mat has a basis weight ranging from about 0.9 to 2.2 pounds per 100 square feet.
19. (original) A gypsum board as recited by claim 18, wherein said fibrous mat has a basis weight of about  $1.25 \pm 0.2$  pounds per 100 square feet.
20. (original) A gypsum board as recited by claim 1, said second facer comprising kraft paper.

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21. (original) A gypsum board as recited by claim 1, said second facer comprising a fibrous mat.
22. (currently amended) A gypsum board as recited by claim 1, said second facer being a fibrous mat comprising a non-woven web bonded together with a resinous binder, and said web being composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ . Deleted: continuous
23. (original) A gypsum board as recited by claim 1, wherein said gypsum core further comprises at least one water repellant agent.
24. (original) A gypsum board as recited by claim 1, wherein said gypsum core further comprises reinforcing fiber.
25. (original) A gypsum board as recited by claim 1, wherein said gypsum core further comprises a biocide.
26. (original) A gypsum board as recited by claim 1, said board having flame resistance sufficient to pass the test of ASTM Method E84, Class 1.
27. (currently amended) In a gypsum board having a first face and a second face and a non-woven fibrous mat affixed to at least one of said faces, the improvement wherein said mat comprises a web bonded together with a resinous binder and comprising chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ . Deleted: continuous
28. (withdrawn) A process for manufacturing an article comprising a hydraulic set material layer having first and second faces, and first and second facers affixed

thereto, at least said first facer comprising a non-woven, fibrous mat, the process comprising:

- a. providing said non-woven, fibrous mat having a fibrous web composed of chopped continuous glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$  bound together with a resinous binder;
- b. forming an aqueous slurry comprising at least one member selected from the group consisting of anhydrous calcium sulfate, calcium sulfate hemi-hydrate, and hydraulic setting cement;
- c. distributing the slurry to form a layer on said first facer;
- d. applying said second facer onto the top of said layer;
- e. separating the resultant laminate into individual articles; and
- f. drying the articles.

29. (currently amended) A fibrous mat comprising a non-woven web bonded together with a resinous binder, said web being composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ .

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30. (currently amended) A fibrous mat as recited by claim 29, wherein at least about 90% by weight of said chopped glass fibers have a diameter ranging between about 9.5 and 12.5  $\mu\text{m}$ .

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31. (original) A fibrous mat as recited by claim 29, said mat having a permeability of at least about 300  $\text{cfm}/\text{ft}^2$  measured by the Frazier test.

32. (currently amended) A hydraulic set board, comprising:
- a. a hydraulic set material layer having a first and a second face; and

- b. first and second facers affixed to said first and second faces, at least of said first facer being a fibrous mat comprising a non-woven web bonded together with a resinous binder, and said web being composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ .

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